Ordering number : EN 1351B

Monolithic Linear IC

No.1351B

SANYO

LA7950

TV Field Frequency Discriminator

The LA7950 is an IC designed to discriminate the field frequency based on the relation between TV vertical signal and horizontal signal. It is suited for use in automatically setting various types of video equipment, such as color TV, to PAL/NTSC mode.

Functions

- Sync separation
- Field frequency counter
- Vertical sync separation
- Forced (manual) output select

Features

- Small-sized package (SEP10)
- Stable to external disturbance such as noise
- Many output pins for mode select (4 outputs)
- Wide operating voltage range (6 to 13V)

Maximum Ratings at Ta=25°C

				unit
Maximum Supply Voltage	V_2 max		14	V
Load Current	$I_{7,8,9,10}$		20	mA
Allowable Power Dissipation	Pd max	Ta≦60°C	300	mW
Operating Temperature	Topr		-20 to +85	°C
Storage Temperature	Tstg		-40 to +125	°C

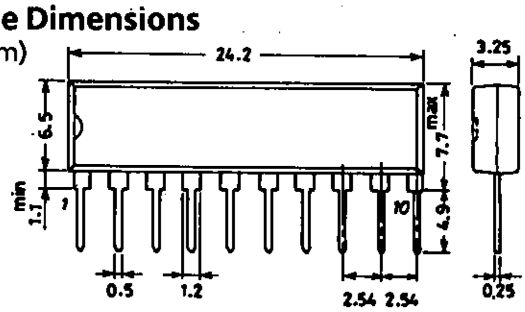
Operating Conditions at Ta=25°C

			unit
Recommended Supply Voltage	V_2	12	V
Operating Voltage Range	V_2 op	6 to 13.2	V

Operating Characteristics at Ta=25°C, V_2=12V, See Test Circuit.

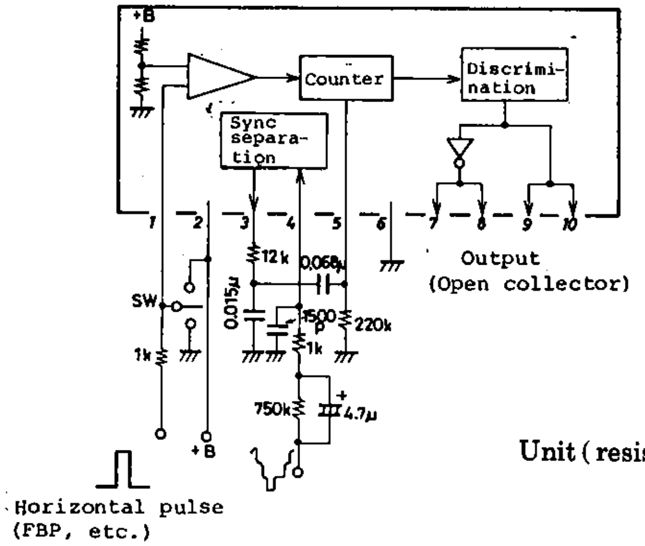
			min	typ	max	unit
V_{CC2} Current Dissipation	I_{CC2}	Pin 1 GND	8	12	16	mA
Sync Separation Output Voltage	V_3	20kohm across pin 4 and GND	10.5	11.0	11.5	V
Pin 1 DC Voltage	V_{DC1}		4.8	5.3	5.8	V
Forced PAL Operation Start Voltage	V_{POS}				11.2	V
Forced PAL Nonoperation Max. Voltage	V_{PNH}		8.6			V
Forced NTSC Operation Start Voltage	V_{NOS}		0.4			V
Forced NTSC Nonoperation Min. Voltage	V_{NNL}				2	V
Output Saturation Voltage	$V_{7,8,9,10}$	$I_{7,8,9,10}$=10mA			0.7	V

Package Dimensions
(unit : mm)
3043A



SANYO: SEP10

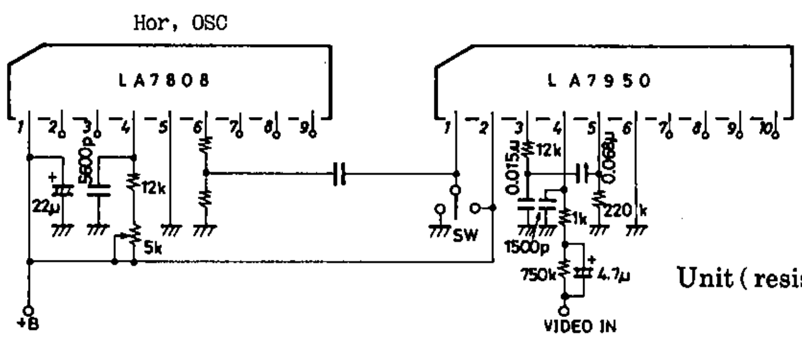
Functional Blocks and Sample Application Circuit 1



Unit (resistance:Ω, capacitance:F)

		Discrimination of field frequency	Output	
			Pins 7,8	Pins 9,10
Number of horizontal scanning lines per field (Number of horizontal pulses)	240 to 287	60Hz (NTSC)	off	on
	288 to 340	50Hz (PAL)	on	off
Forced select SW	GND	60Hz (NTSC)	off	on
	+B	50Hz (PAL)	on	off

Sample Application Circuit 2: Using dedicated clock (LA7808)



Unit (resistance:Ω, capacitance:F)